

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A load balancing method for a first network and a second network, said second network having a plurality of segments each connecting terminals, for relaying data between the first and second networks, each segment including a plurality of apparatuses each relaying a packet between the first network and the segment, said method comprising the steps of:

storing source addresses of the terminals for relaying data in the first network, in a terminal address table provided in each apparatus relaying data between the terminals and the first network, said each apparatus relaying data having ~~a source address~~ said source addresses stored in its associated table;

measuring a load of data to be relayed in the first network and exchanging load between a plurality of the apparatus;

if the load data to be relayed in the first network via one apparatus is largest or relatively large, selecting another apparatus having a smallest or relatively small load, and deleting a source address selected in accordance with the load to be relayed in the first network for each of source addresses of the terminals, from said terminal address table;

notifying the selected other apparatus of the source address of the terminal deleted from the terminal address table of said one apparatus ~~to the selected other apparatus; and~~

storing the notified deleted source address in the terminal address table of the notified other apparatus.

2. (original) A load balancing method according to claim 1, further comprising the steps of:

when a failure at the other apparatus is detected, judging whether the load of the one apparatus is smallest or relatively small; and

if the load of the one apparatus is smallest or relatively small, inheriting an entry of said other apparatus.

3. (original) A load balancing apparatus comprising:
a measuring unit for measuring a load of data to be relayed in a network;
a statistical processing unit for exchanging load data measured by said measuring unit between the apparatus and other apparatus;
a data recording unit for recording the load data to be relayed in the network, respectively of each of the other apparatus and each terminal received from said statistical processing unit;
a terminal address table for recording as an entry a source address of each terminal for relaying data in the network;

a condition setting unit for judging from the load data recorded in said recording unit whether the load of the apparatus is largest or relatively large, and if the load is largest or relatively large, determining an entry which is passed to the other apparatus having a smallest or relatively small load; and

a terminal table managing unit for notifying the entry determined by said condition setting unit to the other apparatus and deleting the entry from the terminal address table.

4. (currently amended) A load balancing method for balancing loads of a plurality of processing apparatus, each processing apparatus relaying a packet between a first network and a second network, said second network having a plurality of segments each connecting terminals, said method comprising the steps of:

in each processing apparatus:

registering source addresses of the terminals for relaying said packet in the first network, in a terminal address table provided in each apparatus;

relaying a packet having an address registered in the terminal address table as a source address;

measuring a load of packet to be relayed in the first network and exchanging load data regarding load between the self-an apparatus of said plurality of processing apparatus performing the measuring and the other of said plurality of processing apparatus;

selecting another processing apparatus and a source address to be moved to said another processing apparatus such that said measured load may be changed according to the exchanged load data and notifying said selected another processing apparatus of the selected source address;

deleting said notified source address from said terminal address table of the self-apparatus; and

if a further source address is notified from a further processing apparatus, registering the notified further source address in said terminal address table of the self-apparatus.

5. (currently amended) A method according to claim 4, wherein said selecting step, when the load data indicates that the load of the self-apparatus is larger than that of another processing apparatus, selects another apparatus having a small load, and selects a source address to be moved to said selected another processing apparatus.

6. (currently amended) A method according to claim 4, further comprising a step of, in response to occurrence of a failure in said another processing apparatus, registering a source address registered in the terminal address table of the faulty another apparatus, in the terminal address table of the self-apparatus if the load of the self-apparatus is determined to be smaller than that of the faulty another processing apparatus.

7. (currently amended) A load-balance processing apparatus for relaying a packet between a first and a second network, said second network having a plurality of segments each connecting terminals, said apparatus comprising:

a terminal address table holding source addresses of the terminals;

means for replaying a packet to be transmitted, said packet having a source address registered in said terminal address table;

a first traffic measuring unit for measuring the amount of traffic between the self-load-balance processing apparatus and said first network for each terminal;

a second traffic measuring unit for measuring the amount of traffic between the self-load-balance processing apparatus and said segment for each terminal;

a statistical processing unit for exchanging the traffic amounts measured by said first traffic measuring unit and said second traffic measuring unit, with those of another processing apparatus;

a recording unit for recording said traffic amounts of the self-load-balance processing apparatus and the exchanged traffic amounts; and

means for moving said source address held in said terminal address table to a terminal address table of another processing apparatus in accordance with said traffic amounts of the self-load-balance processing apparatus and the another processing apparatus recorded in said recording unit.